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TABLE OF EXHIBITS

Exhibit No.	Description
Ex. 1	U.S. Patent No. 7,777,728
Ex. 2	Manual for the Nokia N770
Ex. 3	U.S. Patent No. 9,335,825
Ex. 4	Oxford Desk Dictionary excerpt
Ex. 5	Excerpt from the '825 patent file history

TABLE OF ABBREVIATIONS

Abbreviation	Description
WSOU	Plaintiff WSOU Investments, LLC d/b/a Brazos License and Development
Google	Defendant Google LLC
'728 patent	U.S. Patent No. 7,777,728
'825 patent	U.S. Patent No. 9,335,825
POSITA	Person Of Ordinary Skill In The Art

** Emphasis added unless indicated otherwise.*

*** For the Court's convenience, Google cites to WSOU's opening brief by referring to the brief filed in Civil Case No. 6:20-cv-578-ADA (which is the same for all of the above-captioned cases) and to the pagination generated by CM/ECF (at the top of the page) rather than the pagination at the bottom of the page.*

I. U.S. PATENT NO. 7,777,728 (CASE NO. 6:20-CV-583-ADA)

The '728 patent (Ex. 1) generally describes a “text input method for an electronic apparatus having a user interface with a touch sensitive display.” (*Id.* at 1:7-8.) It describes a “user interface, wherein a virtual keyboard is displayed on the display so as to facilitate input of an intended character for a user by touching keys of the virtual keyboard with a pointer.” (*Id.* at 1:66 to 2:2.)

A. “tap direction” (claims 1, 11, 16)

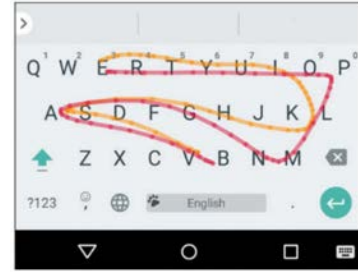
Google’s Construction	WSOU’s Construction
tap direction that extends between the first tap position and a second tap position	plain and ordinary meaning

WSOU’s infringement contentions accuse glide typing, which does not involve the user tapping the screen, but instead dragging a finger without lifting it up. As a result, WSOU seeks a construction that ignores the “tap” in “tap direction,” and conflicts with intrinsic and extrinsic evidence. Google’s construction seeks to confirm that “tap” means “tap,” by asking the Court to construe “tap direction” to mean “tap direction that extends between the first tap position and a second tap position,” ensuring that the user is tapping rather than gliding, and remaining consistent with the intrinsic and extrinsic record. WSOU claims that plain and ordinary meaning will suffice (Dkt. 33 at 9),¹ but WSOU and Google differ on the plain and ordinary meaning of “tap direction,” and thus “reliance on a term’s ‘ordinary’ meaning does not resolve the parties’ dispute.” *O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1361 (Fed. Cir.

¹ For the Court’s convenience, Google cites to WSOU’s opening brief by referring to the brief filed in Civil Case No. 6:20-cv-578-ADA (which is the same for all of the above-captioned cases) and to the pagination generated by CM/ECF (at the top of the page) rather than the pagination at the bottom of the page.

2008).

The glide typing WSOU accuses of infringement allows the user to make a freeform shape on the keyboard, and uses that shape to derive a word to input into the text field. Glide typing does not involve or even allow tapping, which would prevent it from



interpreting a shape. WSOU’s construction would thus read the word “tap” out of the claim, by including any “direction” instead of only a “tap direction.” As WSOU admits, “interpretations that render some portion of the claim language superfluous are disfavored.” (Dkt. 33 at 10 (quoting *Power Mosfet Techs., L.L.C. v. Siemens AG*, 378 F.3d 1396, 1410 (Fed. Cir. 2004))); see, e.g., *Merck & Co. v. Teva Pharms. USA, Inc.*, 395 F.3d 1364, 1372 (Fed. Cir. 2005) (“A claim construction that gives meaning to all the terms of the claim is preferred over one that does not do so.”); *Qcue, Inc. v. Digonex Techs., Inc.*, Case No. 12-484, 2013 WL 4784120, at *4 (W.D. Tex. Sept. 5, 2013) (“[P]roposed construction would impermissibly read ‘pricing’ out of the claim.”), *aff’d*, 575 Fed. App’x 895 (Fed. Cir. 2014). Although WSOU argues that Google’s construction would render claim language superfluous (Dkt. 33 at 10), that is not so: Google’s construction would ensure that that “tap” has meaning by confirming that a “tap direction” extends between two taps, a “first tap position and a second tap position.”

The specification confirms that the patentee understood “tapping” to mean tapping, that is, a press-down followed by a lift-up in the same location. The specification notes that a “user 9 may operate the pocket computer 1 by pointing/**tapping/dragging with a pointer** 9c such as a stylus or pen,” acknowledging that “pointing,” “tapping,” and “dragging” are different actions (Ex. 1 at 4:54-60), but specifically chose “tap” in the claims. Furthermore, in describing how “[t]he distance and angle between the new position 163 and the previous position 161 is

calculated” (*id.* at 7:31-33), the patent provides that “the user 9 has **pressed stylus 9c on the screen at the position 161** for the letter ‘d’” and “[t]o input the next letter, ‘o’, the user 9 then **lifts** and moves the stylus along a path 162, and **presses down the stylus at a new position.**” (*Id.* at 7:12-17.) Google’s construction honors the specification and the patentee’s decision to include the word “tap” in the claims; WSOU’s construction contradicts the specification and would render “tap” in the claims superfluous. *Merck*, 395 F.3d at 1372.

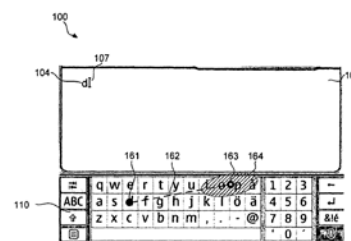


Fig 9a

Finally, extrinsic evidence confirms the patentee’s understanding of “tap” to mean a press-down followed by a lift-up in the same location. The ’728 depicts a device, the Nokia N770, that patentee Nokia released shortly before it filed the application that became the patent. (*Compare* Ex. 2 at 1 *with* Ex. 1 at Fig. 6; *see also* Ex. 1 at Figures 1-3, 7-9b.) The manual for the N770 stated that a tap is a “stylus down and up on the same object,” which it distinguished from other touch actions:

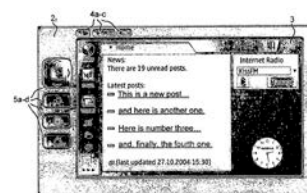


Fig 6

- Single tap — To activate controls and other interactive interface components, tap them once with the stylus (stylus down and up on the same object). A single tap may open a list, activate a button in a dialog or a link on a Web page, select a check box, and activate a text input method from a text field.

(Ex. 2 at 11.) The N770 Manual specifically distinguished “tapping” from “dragging”:

- Drag and drop — To drag an item, hold the stylus down on a highlighted item, drag the item to its new location, and release the stylus. To drag and drop multiple items, perform a continuous multiple selection, and start the drag from the highlighted item.

(*Id.*) Accordingly, WSOU’s interpretation of “tap direction” to include dragging misinterprets not only the patentee’s understanding in the intrinsic record, but also its public explanation of the

same term in the manual for the device depicted by the patent. Google’s construction follows the intrinsic and extrinsic record. The Court should adopt it.

II. U.S. PATENT NO. 9,335,825 (CASE NO. 6:20-CV-578-ADA)

The ’825 patent relates to an apparatus that uses a continuous wave doppler radar to detect a human gesture and interpret the detected gesture as a user input command. (Ex. 3 at 2:27-29.) The apparatus transmits radio signals that are reflected by a portion of the human body, such as a moving hand. (*Id.* at 2:53-54.) The reflection of the transmitted radio signals imparts a time-varying modulation to the radio signals, which is detected and used to identify one or more time-varying parameters that characterize the hand gesture that caused the signal modulation. (*Id.* at 2:52-67, 4:19-45.)

A. “continuous wave doppler radar” (claims 1 and 19)

Google’s Construction	WSOU’s Construction
a Doppler radar that emits an uninterrupted electromagnetic signal	plain and ordinary meaning

WSOU recognizes that the ’825 patent distinguishes a “continuous wave” Doppler radar from a Doppler radar that is “pulsed to save power.” (Dkt. 33 at 11.) The ’825 patent explains that a Doppler radar “does not have to be on continuously and may be pulsed to save power.” (Ex. 3 at 4:23-24.) WSOU also acknowledges that “the specification describes two types of Doppler radar detectors: continuous wave and pulse.” (Dkt. 33 at 11.) Google’s construction simply articulates this distinction by giving the term “continuous” its commonly understood meaning of being “uninterrupted.” (Ex. 4 at 003 (defining “continuous” as “uninterrupted; unbroken”).)

Google agrees that the ’825 patent distinguishes between a “continuous” Doppler radar and a Doppler radar that is “pulsed to save power.” (Ex. 3 at 4:2-24.) Similarly, the

specification distinguishes a “continuous wave” radar from a “pulsed Doppler or pulsed Ultra wideband” radar. (*Id.* at 4:33-36.) During prosecution in order to overcome a prior-art rejection, the inventors stressed the distinction between a “continuous wave” Doppler radar and a radar that emits a pulsed signal. (Ex. 5 at 0577-589.) In doing so, the inventors amended the claims to recite a “*continuous* wave Doppler radar,” and then distinguished the prior art as using “pulses.” (*Id.* at 0586 (inventors explaining that “measuring the phase of the sent and received pulses as in [the prior art] clearly cannot be seen to disclose or suggest at least where amended claim 1 relates to *detecting the predetermined time-varying modulation of the received signal comprising detecting a doppler frequency shift in the transmitted radio signals based on a continuous wave doppler radar*”).)

Google’s construction reflects the distinction between a “continuous wave” Doppler radar and a radar that emits a pulsed signal. In accordance with the ’825 patent and prosecution history, a “continuous wave” Doppler radar emits a “continuous”, *i.e.*, uninterrupted, electromagnetic signal. In contrast, a radar that is “pulsed” emits an electromagnetic signal that is interrupted.

WSOU asserts that Google’s construction could somehow be “misapplied” to exclude Frequency Modulated Continuous Wave Doppler radar. (Dkt. 33 at 11-12.) This is wrong. That is not Google’s argument, and WSOU makes no attempt to explain *why* or *how* Google’s construction could be applied in this way. Whether the frequency of a transmitted signal is modulated has no bearing on whether the emitted signal is “continuous,” *i.e.*, uninterrupted. In fact, Google’s proposed construction helps avoid any jury confusion between “wave” and “pulse” or “modulate” by confirming, as the patent does, that the relevant signal must be uninterrupted.

- B. “at least one memory and the computer program code are configured, with the at least one processor, to cause the apparatus to at least: detect that an application is being started on the apparatus; in response to the application being started on the apparatus, turn on a continuous wave doppler radar at the apparatus” (claim 1)**

Google’s Construction	WSOU’s Construction
Subject to Section 112, ¶ 6 Indefinite for lack of structure	plain and ordinary meaning

The dispute is whether the term “at least one memory and the computer program code are configured, with the at least one processor, to cause the apparatus” to perform the functions of “detect[ing] that an application is being started on the apparatus,” and “in response to the application being started on the apparatus, turn on a continuous wave doppler radar” is subject to Section 112, ¶ 6 and indefinite for failure to disclose corresponding structure.

To determine whether Section 112, ¶ 6 applies, the threshold inquiry is “whether the words of the claim are understood by [POSITAs] to have a sufficiently definite meaning as the name for structure.” *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348 (Fed. Cir. 2015). Though absence of the word “means” creates a rebuttable presumption that a term is not a means-plus-function limitation, Section 112, ¶ 6 applies when the claim term: (i) “fails to recite sufficiently definite structure,” or (ii) “recites function without reciting sufficient structure for performing that function.” *Id.* at 1349. Importantly, “[t]he question is not whether a claim term recites any structure but whether it recites sufficient structure—a claim term is subject to § 112(f) if it recites function without *reciting sufficient structure* for performing that function.” *Egenera, Inc. v. Cisco Sys., Inc.*, 972 F.3d 1367, 1374 (Fed. Cir. 2020).

Claim 1’s formulaic reference to “computer program code” and a “processor” does not connote sufficient structure to avoid means-plus-function treatment. Indeed, as this Court explains, applicants cannot “*simply recite two nonce words—‘processor’ and ‘code’—together*

in order to essentially write the claim in a means-plus-function format without being subject to § 112, ¶ 6.” *Dyfan, LLC v. Target Corp.*, 6:19-cv-179-ADA, Dkt. 57 at 20 & n.4 (W.D. Tex. 2020). The same is true here for claim 1. And the addition of “at least one memory” does not add any meaningful structure. The memory simply indicates where the “code” is stored; it does not convey any structural specificity to the generic term “program code.” The specification confirms that a processor, memory, and program code are black-box placeholders requiring specific algorithms to perform the recited functions. (Ex. 3 at 5:12-18, 5:31-34 (“The computer program instructions provide the logic and routines that enables the apparatus to perform the methods illustrated in FIG. 6. The processor 20 by reading the memory 22 is able to load and execute the computer program.”).)

WSOU’s argument that the “program code” somehow “connotes specific structure in view of the detailed functional tasks recited in the body of the claim” (Dkt. 33 at 14) proves the opposite. That claim 1 requires the “program code” to perform a multitude of different, detailed functions demonstrates that “program code” amounts to nothing more than a generalized catch-all for whatever algorithms may perform the recited functions. *See, e.g., Media Rights Techs., Inc. v. Capital One Fin. Corp.*, 800 F.3d 1366, 1372 (Fed. Cir. 2015) (applying Section 112, ¶ 6 because “the claims simply state that the ‘compliance mechanism’ *can perform various functions*”); *Williamson*, 792 F.3d at 1350 (applying Section 112, ¶ 6 when the claim language “replaces the term ‘means’ with the term ‘module’ and *recites three functions* performed by the ‘distributed learning control module’”).

WSOU also cites *LG Elecs., Inc. v. Bizcom Elecs., Inc.*, 453 F.3d 1364 (Fed. Cir. 2006), but that case was decided *before* the en banc *Williamson* decision. The Federal Circuit expressly cautions against reliance on pre-*Williamson* cases when assessing whether Section 112, ¶ 6

applies. *See Egenera*, 972 F.3d at 1374 (rejecting arguments against applying Section 112, ¶ 6 because “none of [plaintiff’s] precedent considers *Williamson*”); *Media Rights*, 800 F.3d at 1373 (cautioning against reliance pre-*Williamson* “superseded case law, which imposed a heavy presumption against finding a claim term to be in means-plus-function format”).

Finally, for step two of the means-plus-function inquiry, the ’825 patent does not disclose any structure or algorithm to perform the claimed functions of “detect[ing] that an application is being started,” and “turn[ing] on a continuous wave doppler radar.” Tellingly, WSOU does not even attempt to identify such structure, and by “not having raised the issue in its opening brief, [plaintiff] has waived that argument.” *First-Class Monitoring, LLC v. UPS, Inc.*, 389 F. Supp. 3d 456, 469 (E.D. Tex. 2019) (Judge Bryson). Addressing similar circumstances, the Federal Circuit instructs that “[o]n this point [] *little needs to be said*” because plaintiff “*did not argue* to this court that, even if the claim language at issue is within § 112, ¶ 6, the language is definite because the specification sufficiently discloses corresponding structure.” *Robert Bosch, LLC v. Snap-On Inc.*, 769 F.3d 1094, 1101 (Fed. Cir. 2014). In any event, nothing in the specification provides structure for performing the claimed function. Rather, the ’825 patent depicts the processor as an empty rectangle without any structural detail (Ex. 3 at Fig. 2), and states that the processor executes various computer program instructions that are stored in memory. Entirely absent from the disclosure, and necessary under the law, is a description of algorithms, routines, or instructions by which to perform the claimed functions. The disclosed structure must be “the special purpose computer programmed to perform the disclosed algorithm.” *WMS Gaming, Inc. v. Int’l Game Tech.*, 184 F.3d 1339, 1349 (Fed. Cir. 1999). It is equally “well settled that simply disclosing software [] without providing some detail about the means to accomplish the function is not enough.” *Function Media, L.L.C. v. Google, Inc.*, 708 F.3d 1310, 1318 (Fed Cir. 2013).

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CERTIFICATE OF SERVICE

I certify that on February 12, 2021, I served the foregoing by electronic mail on counsel of record.

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